

CLAIMS

I CLAIM:

1. A male BNC connector half comprising:

2 a male BNC connector shell having a shouldered bore therethrough and forming at one
end a mating cylinder for entering a female BNC connector shell having bayonet pins;

4 a bayonet latch having spiral grooves ending in detents for engaging bayonet pins when
the mating cylinder enters the female BNC connector shell, and having a region of external
6 threads;

the bayonet latch slidably and rotatably affixed to the male BNC connector shell and over
8 the mating cylinder;

a center conductor support bead having a central hole therein and that fits snugly in the
10 shouldered bore and rests against an internal shoulder therein when inserted into the shouldered
bore from an end opposite the location of the mating cylinder;

12 a threaded retaining member that screws into the shouldered bore at the end opposite the
location of the mating cylinder and that contacts the center conductor support bead and holds it
14 against the internal shoulder;

a male center conductor pin held coaxially along the axis of the shouldered bore by
16 threaded compression through the central hole in the center conductor support bead and which
forms an air dielectric transmission line with the interior of the mating cylinder;

18 a connecting center conductor passing coaxially through a bore in the threaded retaining
member, which threadably mates with the male center conductor pin through the central hole in
20 the center conductor support bead to provide the above recited threaded compression, and that
is part of a transmission line for carrying signals to and from the male BNC connector half;

22 the male BNC connector shell also having an external shoulder proximate the location
where the bayonet latch is affixed thereto; and

24 a draw nut having a bore therethrough with internal threads thereon, having a reduced
diameter at one end that slides snugly over the outside of the BNC male conductor shell

- 26 proximate the external shoulder thereon and in a direction that is from the threaded retaining
member toward the mating cylinder, in an orientation where the internal threads pass over the
28 external shoulder and rotatably engage the external threads of the bayonet latch;
a retainer affixed into bore of the draw nut at the end thereof opposite that having the
30 reduced diameter;
a friction medium disposed in the bore of the draw nut and within a region bounded by
32 the region of external threads of the bayonet latch and the retainer, the friction medium in contact
with a cylindrical outer surface of the bayonet latch and with a cylindrical inner surface of the
34 draw nut;
the friction medium communicating to the bayonet latch a selected amount of a rotational
36 force in either direction applied to the draw nut.
2. A male BNC connector half as in claim 1, wherein the friction medium comprises rubber and
2 has a cylindrical shape with a bore therein.
3. A male BNC connector half as in claim 2, wherein the rubber is neoprene.
- 2 4. A male BNC connector half as in claim 2, wherein the friction medium further comprises a
metallic washer at each end of the bore therein.
- 2 5. A male BNC connector half as in claim 1, wherein the retainer is a compressed circular ring
expanding into a groove in the bore of the draw nut.
- 2 6. A male BNC connector half as in claim 1, wherein the threaded retaining member comprises a
female APC 3.5 connector shell and the connecting center conductor comprises an APC 3.5 female
center conductor pin.
- 2 7. A male BNC connector half as in claim 1, wherein the threaded retaining member comprises a
clamp type cable attachment.

8. A male BNC connector half as in claim 1, wherein the threaded retaining member comprises a connector shell of another series of RF connectors, and the connecting center conductor comprises a center conductor pin belonging to that other series.

9. A male BNC connector half as in claim 1, further comprising a resilient compressible member disposed between the external shoulder of the connector shell and the reduced diameter of the draw nut.

10. A male BNC connector half as in claim 9, wherein the resilient compressible member is a spring washer.